REMARKS

All of the remaining claims 41 – 49 currently in the present application stand rejected on the following grounds, as the Office Action is understood:

1) Obviousness under 35 U.S.C. §103(a) over a combination of U.S. patent no. 5, 115,236 (hereinafter "Kohler") and the IrDA specification as discussed on page 3 of the present application;

2) Anticipation under 35 U.S.C. §102(b) over the Kohler patent;

3) Anticipation under 35 U.S.C. §102(b) over the IrDA specification as discussed on page 3 of the present application; and

4) Obviousness under 35 U.S.C. §103(a) over a combination of the Kohler patent, European published patent application no. 0 772 307 (hereinafter "Selin") and the IrDA specification as discussed on page 3 of the present application.

Reconsideration of each of these grounds of rejection is respectfully requested in light of these Remarks.

The Claims Specify a New Use of the IrDA Discovery Signal

Page 3 of the present application Background describes the purpose of the standard "discovery" signal of the Infrared Data Association (IrDA). An infrared receiver, under full power, listens for an IrDA discovery signal from an infrared transmitter within communication range. As pointed out in the "Serial Infrared Link Access Protocol (IrLAP)," Version 1.1 dated June 16, 1996, relevant portions of which have been made of record in the file of the present application, receipt of the standard discovery signal informs the receiver of the presence of a transmitter within communication range that is available for a communications connection. What is new in the claims is the use of this standard discovery signal, when received, to additionally cause the infrared receiver to switch from a low power, stand-by state to a full power state. While listening for an IrDA discovery signal, the receiver is operating in a low power mode, and, when the IrDA discovery signal is received, the receiver switches to full power operation.

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The Cited Kohler Patent Does Not Show This New Use of the IrDA Discovery Signal To Have Been Obvious

It is respectfully submitted that cited Kohler patent does not suggested this new use of the standard discovery signal. Kohler describes a receiver that operates in a low power mode until a high-energy pulse is received, to which it responds by switching to full power operation. It is not seen how this could have made it obvious to use the IrDA standard discovery signal to power-up the receiver. The IrDA standards specify use of this claimed signal for the discovery of other transceivers within communication range. Nothing is seen in Kohler that suggests the claimed new use of that signal to power-up the receiver.

Kohler describes responding to the high power pulse to "wake up" the receiver from a rest state to an operative state. The Office Action argues, since page 3 of the present application characterizes the prior use of the IrDA discovery signal to "wake up" the receiver, that this is the same thing and rendered it obvious to simply substitute one "wake up" signal for another. But this is respectfully submitted to be incorrect. As page 3 of the present application makes clear, the receiver waiting for the IrDA discovery signal is operating in a full power mode. For such a receiver to "wake up" to the existence of a transmitter in communication range is not the same as the receiver of Kohler responding to the high energy pulse to "wake up" from a power down mode to a full power mode.

The term "wake up" refers to different receiver actions in the two descriptions. This is not a case of simply substituting one "wake up" signal for another. The IrDA discovery signal and the high energy pulse of Kohler do not do the same thing. What is new in the claims is the use of the IrDA discovery signal to power up the receiver from a standby mode when this signal had previously been used to alert a receiver already operating at full power to the existence of a transmitter in communication range.

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The Claims Are Clearly Not Anticipated by Kohler or the IrDA Specification

The basis of the rejection(s) under 35 U.S.C. 102(b) is not completely understood but it is assumed that independent anticipation rejections were intended over either the Kohler patent alone or the IrDa discovery signal specification, as discussed on page 3 of the present application, alone. It is believed that the foregoing discussion makes it clear that neither reference alone anticipates the claims. The Kohler patent says nothing of use of the IrDA discovery signal, which is in all the claims. The specification for the IrDA discovery signal, as discussed on page 3 of the present application, says nothing of using the discovery signal to power up a receiver, which is in all the claims.

The Cited Selin Patent Publication Does Not Show The New Use of the IrDA Discovery Signal To Have Been Obvious

It is respectfully submitted that cited European patent publication also fails to suggest the claimed new use of the standard IrDA discovery signal. The claims do not simply recite the use of any digital signal to power up a receiver, as the Office Action seems to be contending by citing Selin for use of such a digital signal. Rather, the claims recite use of the specific IrDA discovery signal to power up the receiver. Because of the nature of the IrDA discovery signal, this occurs when an infrared transmitter is within a communications range of the receiver. Nothing is seen in Selin that could be taken to suggest this new use of the IrDA discovery signal.

Specific Claims

The foregoing discussion is directed to the patentability of the basic idea included in all the claims remaining in the present application since the Office Action is primarily directed to this idea. In addition, however, many of the pending claims include various details of a method or apparatus that are not suggested by the cited references.

Independent claim 42 and its dependent claims 43 and 44, for example, describe a complete power controlled transceiver while the Kohler patent appears to describe only a power controlled receiver (Figure 2) and separate transmitters (Figures 3 and 4) that are capable of generating the power-up pulse required by the receiver. Nothing in Kohler has

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been found to suggest power control of the infrared transmitter and a signal processor that is common to both the receiver and transmitter, as specified by claim 42. Claims 45 – 49 also each specify that the infrared transmitter of a transceiver is powered up along with the receiver, a feature that is not apparent from Kohler. Indeed, Kohler describes (col. 6, lns. 29 – 36) inhibiting the transmitter for a time only after the wake up pulse is received, implying that the transmitter is otherwise enabled before the wake up pulse is received.

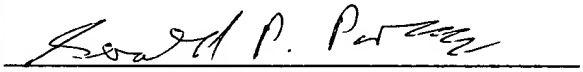
Further, claims 46 and 49 specify that the power up is accomplished by a second receiver (photodetector) and detection circuit. Nothing has been noted in the cited references to suggest use of a receiver and detection circuit for powering up the transceiver that are separate from the normal receiver and detection circuit.

Conclusion

An early indication of the allowance of the present application is solicited. However, if the Examiner has any further issues that need to be considered, he is invited to telephone the undersigned attorney at 415-217-6293.

Express Mail No.:
EV212982669US

Respectfully Submitted,



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TEXT OF ALL APPLICATION CLAIMS AFTER AMENDMENT

41. A communications device, comprising:

an infrared signal transceiver system having fully operational and stand-by power modes, and including a characteristic of detecting, when in the stand-by power mode, the receipt of an IrDA discovery infrared signal, and

a power control circuit as part of the transceiver system that is responsive to detecting the receipt of the IrDA discovery infrared signal when in the stand-by power mode for causing the transceiver system to switch from the stand-by power mode to the fully operational power mode.

42. A communications device, comprising:

an infrared signal transmitter,

an infrared signal receiver,

a signal processor that supplies electrical signals to the transmitter for transmission of data as infrared signals and that receives electrical signals from the receiver representing infrared signals of data received thereby,

a power supply connected to operate the infrared signal transmitter, the infrared signal receiver and the signal processor either in a fully operational mode or in a stand-by mode,

a detection circuit connected to the infrared signal receiver in a manner to generate a power-up signal in response to an IrDA discovery infrared signal being received by the infrared signal receiver when operating in the stand-by mode, and

wherein the power supply responds to the power-up signal by switching operation of the infrared signal transmitter, the infrared signal receiver and the signal processor from the stand-by mode to the fully operational mode.

43. The communications device of claim 42, wherein the power supply consists of a battery source of power.

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44. The communications device of claim 42, wherein the detection circuit is separate from the signal processor and operable when in a stand-by mode.

45. An infrared signal transceiver system, comprising:

a battery supply of power having fully operational and stand-by power states,

a transmitter of infrared signals containing data supplied by a host that operates when the system is in the fully operational power state but not when in the stand-by power state,

a receiver of infrared signals containing data provided to a host that operates when the system is in the fully operational power state but not when in the stand-by power state,

a detector circuit connected to the infrared signal receiver that causes the power supply to switch to the fully operational power state in response to receipt by the infrared signal receiver of an IrDA discovery infrared signal when the system is in the stand-by power state.

46. In an infrared transceiver system having an infrared data signal transmitter, an infrared data receiver and signal processing and controlling electronics that are powered either in a fully operational mode or in a stand-by mode by a power supply, the combination additionally comprising a second infrared signal receiver and a detection circuit connected thereto that emits, in response to the second receiver receiving an IrDA discovery infrared signal, a power-up signal that causes the power supply to switch from the stand-by power mode to the fully operational power mode.

47. A method of operating an infrared transceiver system having an infrared data signal transmitter, an infrared data receiver and signal processing and controlling electronics that are powered by battery source either in a fully operational mode or in a stand-by mode, comprising:

detecting receipt of an IrDA discovery infrared signal when the transceiver system is in the stand-by power mode, and

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in response to receipt of the IrDA discovery infrared signal when the transceiver system is in the stand-by power mode, causing the transceiver system to switch from the stand-by power mode to the fully operational power mode.

48. The method of claim 47, wherein receipt of the IrDA discovery infrared signal is detected by an infrared receiver that is also used to receive other infrared data signals when the transceiver system is in the fully operational power mode.

49. The method of claim 47, wherein receipt of the IrDA discovery infrared signal is detected by a secondary infrared receiver that is included in addition to a primary infrared data signal receiver.

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